

A DYNAMICALLY EXTENSIBLE RULE-BASED EXPERT-SYSTEM
SHELL FOR DATABASE-COMPUTING ENVIRONMENTS

ABSTRACT OF THE DISCLOSURE

5 A computer-implemented method for flexibly and efficiently representing
and applying business rules in a transaction-processing relational database
management system (RDBMS) environment. The method includes providing a
deterministic rule-based expert-system shell. A late-binding mechanism within
the RDBMS environment is also provided. An extensible data-maintenance
10 mechanism is created for the rule-based expert-system shell. The extensible
data-maintenance mechanism maintains sets of approval rules governing
business transactions generated by other transaction-processing applications.
The data-maintenance mechanism uses late binding to make the sets of rules
and rule components stored in the data-maintenance mechanism arbitrarily
15 extensible. A rule-processing engine applies the sets of approval rules stored in
the extensible data-maintenance mechanism to business transactions
originating in transaction-processing applications. The method provides for a
plurality of approval-rule types, each making a qualitatively different
contribution to the list of approvers required for any given business
20 transaction. The method calculates the list of approvers required for a given
business transaction by applying the appropriate set of approval rules to the
transaction.